

## REMARKS

Reconsideration and allowance of this application are respectfully requested. In this Amendment, claims 1, 14, 16, 20, 23, 20, 36, 38, 42, 45, 52 and 57 have been amended, claims 19, 35 and 41 have been canceled, and claims 82-84 have been added.

### A. THE 112 REJECTIONS

#### Rejections under 112, 2nd paragraph

Claims 1, 16, 23, 38 and 45 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. However, the Office Action indicated that amending the claims to clarify what is meant by the dynamic popularity threshold would move this case forward. First and foremost, Applicant notes that the terms “dynamic popularity threshold” and “dynamic replication threshold” were both used in the claims, though these terms represented the same meaning. Applicant has amended the claims to consistently use “dynamic replication threshold” throughout the claims. Secondly, Applicant hereby amends each of these claims to more clearly define this threshold as being based at least in part on at least one dynamic measure of capacity, such as for example, available storage at an edge server (e.g., [0043]) and the cost of pulling an object from the network or other cost factors (e.g., [0041]).

In view of the amendments to the claims, withdrawal of this rejection under Section 112, first paragraph, is respectfully requested.

### B. THE PRIOR ART REJECTIONS

The Examiner has rejected all pending claims under 35 U.S.C. §103(a) as being unpatentable over a combination of U.S. Pub. No. 2005/0021863 (“Jungck”) and U.S. Pub. No. 2003/0031176 (“Sim”) (collectively, “the Junck-Sim combination”).

First and foremost, Applicant notes that the Office's prior rejections were based on the Junck-Sim combination, and Applicant reiterates its arguments from the April 14, 2010 Amendment, in which Applicant argued that the Junck-Sim combination fails to teach using a dynamic measure of popularity of content in combination with a dynamic replication threshold. Accordingly, the Junck-Sim combination fails to establish a prima facie case of obviousness with respect to any claim of the present application. For at least this reason, the claims are believed allowable over the Junck-Sim combination.

In addition, Applicant has amended each of the independent claims to recite an embodiment of the present invention in which the dynamic replication threshold recited in each claim is defined to be based at least in part on at least one dynamic measure of capacity. The measure of capacity can be, for example, available storage capacity at an edge server, or the cost of pulling an object to an edge server. Various characteristics are contemplated within the scope of the present invention, but importantly, each claim recites that the threshold is explicitly recited to be a threshold that is ever-changing, as opposed to static. The Junck-Sim combination fails to teach a replication threshold defined at least using any dynamic measure of capacity, and therefore the claims of the present application, in accordance with this embodiment, are clearly distinguished. In the interest of expediting prosecution of this application, certain passages of Sim are addressed, given the Office Action relies upon Sim to purportedly disclose replication based on dynamic replication threshold.

- Sim, **para. 0047** discloses the determination of the amount of content contained in a local storage in order to determine how much additional content to save to the storage, but this determined value is in no way related to a dynamic replication threshold for use in deciding "when" to replicate popular content.

- While Sim, **para. 0052** discloses use of factors of available storage, popularity of the content, distribution criteria by the content provider, but these factors are only taught by Sim in this context to affect the amounts of a large file that may stored at a particular node, but again, are not related in any way to a dynamic replication threshold for use in deciding “when” to replicate popular content.
- Sim, **para. 0138** describes factors (e.g., available storage) used to determine the initial distribution of blocks of content to a node, and available storage is one such factor, but again this passage fails to teach using these factors to define at least in part a dynamic replication threshold for use in deciding “when” to replicate popular content. While this passage discloses something called a “popularity index,” this index is not dynamic as it is explicitly described as set by the content provider, therefore, in this context, Sim actually teaches against such dynamic replication threshold. Accordingly, the combination of Sim with any other reference is improper given Sim teaches a static solution to replication that is the opposite to the dynamic solution provided in connection with the embodiments recited in the claims of this application.
- In Sim, **para. 0230**, Sim describes a process for removing less popular content in order to make room for more popular content, but again this passage doesn't teach or suggest using this process or the results of this process to at least in part define a dynamic threshold for use in deciding “when” to replicate popular content.

**Remarks**

In view of the amendments made herein and the remarks above, the pending claims are believed to be in condition for allowance. Should the Examiner persist in the outstanding rejections even after these amendments, he is invited to contact the undersigned at the telephone number below in order to continue expedition of the present application through prosecution. As three claims were added and three claims were canceled, no fees are believed due for new claims 82-84.

No fees are believed due concurrently with the filing of this Amendment given that the 3-Mos. date for response to the Office Action occurred on a Saturday. Should any additional fees be required, please consider this a request therefore and authorization to charge Deposit Account No. 50-5063 as necessary.

Respectfully submitted,

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Date: \_\_\_\_\_

/David D. Wier /

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